

## **REMARKS**

Claims 1-8 are pending, of which claims 3, 4 and 6-8 have been deemed to include allowable subject matter but objected to, and claims 1, 2 and 5 have been rejected. Applicant has amended claim 1 and 6 to correct certain informalities. No new matter is introduced. Reconsideration and allowance of claims 1-8 are respectfully requested.

### **Claim Objections**

Claims 1-8 are objected to because of informalities. Applicant has amended the claim as appropriate substantially as the Examiner suggested to overcome the objection. Applicant therefore respectfully requests the withdrawal of the objection.

### **Claim Rejections – 35 U.S.C. § 103**

Claims 1, 2 and 5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim et al. (U.S. Patent 6,816,470) in view of applicant's admitted prior art (background of the invention, specification pages 1-5 (hereinafter "APA")). Applicant respectfully disagrees.

First of all, the Examiner alleges that the limitation, "W is the length of the channel impulse response" in col. 3, lines 1-5 of the specification of Kim et al. discloses the step A of claim 1 of the present invention. However, in the step A of claim 1 of the present invention, it is disclosed that P is the total length of the channel estimation window. Both Kim et al. and the present specification disclose the terms W and P, and the meanings of these terms in the present application are consistent with those of Kim et al.

According to the disclosure in paragraphs [4] and [5] of the specification, P is the total length of the channel estimation windows, and W is the length of a channel estimation window. Thus, the step A of claim 1 of the present application refers to a combined channel response of all user terminals, while the technical solution of Kim et al. refers to a channel response of an individual user terminal. It is clear that the combined channel response of all user terminals is different from the channel response of an individual user. Therefore, the applicant respectfully submits that Kim et al. does not disclose the step A of claim 1.

Further, the Examiner alleges that the limitation, “noise variance estimate from N smallest samples out of W, where  $h_i$  are in the order of ascending amplitudes” in col. 3, line 66 - col. 4, line 7 and equation 9 of the specification of Kim et al. discloses the step B of claim 1 of the present invention. However, in the step B of claim 1 of the present invention, it is disclosed that the channel response estimation results corresponding to  $W_1$  taps with less power are selected from the original channel response estimation results. It is the original channel response estimation results with length P from which the  $W_1$  taps are selected. In contrast, Kim et al. discloses that it is W from which the N samples are selected and W is the length of the channel impulse response. Since the range within which the samples are selected in the present invention is different from that in Kim et al., the applicant respectfully submits that Kim et al. does not disclose the step B of claim 1 of the present invention.

According to claim 1, rough estimation for the interference power is performed and then the accurate estimated result of the interference power is obtained with the roughly estimated result of interference power. Since the rough estimation is performed by selection of the taps according to the predetermined threshold of number of taps and the accurate estimation is performed by processing according to the SNR threshold and the obtained roughly estimated result of interference power, it is unnecessary to know the positions of idle channel estimation windows or depend on a priori value of reference threshold of interference power to obtain the accurate measured value of the interference power by two steps of processing (See paragraph [20] of the specification of the present application).

Kim et al. proposes a method and apparatus for interference signal code power noise variance estimation employing a reduced number of samples. Kim et al. does not disclose or suggest steps A and B of claim 1. That is, there is no reason to those skilled in the art to combine Kim et al. with APA to obtain the technical solution of claim 1 of the present invention so as to bring about the technical effects mentioned above. Therefore, claim 1 is not obvious to a person skilled in the art, and thereby is patentable over Kim et al. in view of APA.

Because independent claim 1 is patentable over Kim et al. in view of APA, claims 2 and 5, being dependent on claim 1 and therefore including at least all limitations of claim 1, are also patentable over Kim et al. in view of APA.

For at least theses reasons, Applicant respectfully request the withdrawal of the obviousness rejections of claims 1, 2 and 5.

**Allowable Subject Matter**

Claims 3, 4 and 6-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form incorporating all the limitations of the base claim and any intervening claims. Applicant thanks the Examiner for this determination. However, as discussed above, the base claim (claim 1) and intervening claims (claims 2 and 5) are allowable over cited reference. Applicant therefore respectfully submits that claims 3, 4 and 6-8 are allowable as well and requests the withdrawal of the objections to the same.

### Summary


In view of the above amendments and remarks, Applicant respectfully requests a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.



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Respectfully submitted,

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